The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte LEE CODEL LAWSON TARBOTTON,
DANIEL J. WOLFF,
and NEIL A. COWIE

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Appeal 2007-0956
Application 10/028,651
Technology Center 2100

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Decided: May 10, 2007

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Before JOSEPH F. RUGGIERO, HOWARD B. BLANKENSHIP, and JOHN A. JEFFERY, *Administrative Patent Judges*.

JEFFERY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's rejection of claims 1-10, 12-23, 25-28, 30, and 31. We have jurisdiction under 35 U.S.C. § 6(b).

STATEMENT OF THE CASE

Appellants invented a network security management system that prevents viruses or other malicious code from overwriting or altering critical files. Initially, factors associated with a computer are identified. Then, requests to write to files on the computer are monitored. The writes to the files are conditionally prevented based on the factors to prevent virus proliferation. In addition, the factors are altered based on the monitoring of the requests.[1] Claim 1 is illustrative:

1. A method for preventing writes to critical files, comprising:

(a) identifying factors associated with a computer;

(b) monitoring requests to write to files on the computer; and

(c) conditionally preventing the writes to the files on the computer based on the factors to prevent virus proliferation;

(d) wherein the factors are altered based on the monitoring of the requests to write to the files on the computer;

(e) wherein the factors are updated based on the requests.

The Examiner relies on the following prior art references to show unpatentability:

Stevens	US 2002/0133702 A1	Sep. 19, 2002 (filed Mar. 16, 2001)
Rickey	US 2002/0166059 A1	Nov. 7, 2002 (filed May 1, 2001)

Description of the Windows 2000 Windows File Protection Feature (Q222193), Microsoft Personal Online Support, *available at* http://web.archive.org, Jul. 8, 1999 ("WFP").

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[1] *See generally* Specification 1:6 – 4:27.

The Examiner's rejections are as follows:

1. Claims 1-7, 9, 10, 12-20, 22, 23, 25-28, and 30 are rejected under 35 U.S.C. § 103(a) as unpatentable over WFP in view of Rickey.[2]

2. Claims 8, 21, and 31[3] are rejected under 35 U.S.C. § 103(a) as unpatentable over WFP in view of Rickey and further in view of Stevens.

Rather than repeat the arguments of Appellants or the Examiner, we refer to the Briefs and the Answer for their respective details. In this decision, we have considered only those arguments actually made by Appellants. Arguments which Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

OPINION

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would have suggested to one of ordinary skill in the art the invention set forth in claims 1-10, 12-23, 25-28, and 30. We reach the opposite conclusion, however, with respect to claim 31. Accordingly, we affirm-in-part.

We first consider the Examiner's rejection of Claims 1-7, 9, 10, 12-20, 22, 23, 25-28, and 30 under 35 U.S.C. § 103(a) as unpatentable over WFP in view of Rickey. In rejecting claims under 35 U.S.C. § 103, it is

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[2] Although the Examiner includes claims 11 and 24 in the rejection (Answer 3), these claims have been cancelled. *See* Br. 5 and Claims App.; *see also* Answer 3 (acknowledging copy of appealed claims as correct).

[3] Claim 31 was rejected under a new grounds of rejection to correct a defect in a previous rejection of the claim (Answer 2-3).

incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). Furthermore, "'there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness' . . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex Inc.*, No. 04-1350, slip op. at 14 (U.S., Apr. 30, 2007) (quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)).

If the Examiner's burden is met, the burden then shifts to the Appellants to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

Regarding independent claims 1, 14, and 27, the Examiner's rejection essentially finds that WFP teaches every claimed feature except for preventing writes to the files to prevent virus proliferation. The Examiner cites Rickey as teaching that viruses can enter a system via critical files. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to use WFP's method of blocking writes to files to prevent viruses from entering the system (Answer 4).

Regarding claims 1, 2, 4-7, 13-15, 17-20, 26, and 27,[4] Appellants argue that WFP does not disclose altering factors based on the monitoring of the requests to write to files on the computer as claimed. Appellants emphasize that WFP's system determines if a file has already been modified and, if so, WFP restores the modified file to the correct version. That is, the file is updated *after* being modified. According to Appellants, WFP's updating a modified file does not teach or suggest preventing writes to files on a computer, let alone altering factors based on monitoring of the requests or updating the factors based on the requests as claimed (Br. 9-10; Reply Br. 3-5).

The Examiner argues that the critical files in WFP are the claimed factors. The Examiner notes that whenever a file is modified, a "write call" – and therefore a corresponding write request – occurs in the system. Therefore, WFP monitors write requests as claimed. The Examiner further notes that when WFP replaces a modified file with the correct version, the file (i.e., factor) is altered based on the modification (i.e., write request) (Answer 7-8).

We will sustain the Examiner's rejection of representative claim 1. Although WFP restores modified files to their correct versions as Appellants indicate, Appellants' arguments are simply not commensurate with the scope of the claim.

First, the limitation calling for "factors associated with a computer" is fully met by particular file versions in WFP giving the term

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[4] Appellants designate these claims as corresponding to Group #1 (Br. 9). We therefore select claim 1 as representative of claims corresponding to this group. *See* 37 C.F.R. § 41.37(c)(1)(vii).

"factors" its broadest reasonable interpretation. In WFP, the system identifies the version of the file to determine if corrective action is necessary – a process that fully meets limitation (a) in claim 1.

Second, the limitation calling for "monitoring requests to write to files on the computer" is fully met by the computer's operating system in WFP. We agree with the Examiner that write requests occur in the system when files are modified. Significantly, the monitoring limitation in claim 1 does not specify *which* requests to write to files are monitored. As such, the limitation reads on essentially any computer operating system that inherently "monitors" write requests associated with modifying any files on the computer – including the protected files in WFP.

Third, the limitation calling for "conditionally preventing the writes to the files on the computer based on the factors to prevent virus proliferation" is fully met by WFP.[5] In this regard, we note that WFP's system replaces the file if the version is not the correct version (WFP, last two lines of P. 1). That is, WFP will not replace the file if it is the correct version. In this situation, WFP in effect conditionally prevents writing to the file based at least in part on the "factors" – namely, the version of the file identified as correct.

Fourth, the limitation calling for altering the factors based on the monitoring of the requests is also fully met by WFP. If the new file is not

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[5] We note in passing that the limitation "to prevent virus proliferation" merely recites a desired result intended to be achieved from the conditional prevention step. Such a desired result, however, does not patentably distinguish over the system of WFP notwithstanding the Examiner's reliance on the secondary reference to Rickey to show viruses can enter a system via critical files.

the correct version, the file is replaced. The very act of replacing the file in this manner would cause the system to inherently generate an associated request to write to the file – a write request that likewise is inherently monitored by the computer's operating system. Restoring the file to the correct version both alters and updates the factors (particular file versions in WFP) based, at least in part, on the operating system's monitoring the requests to write to the files and the requests themselves.

For at least these reasons, we find that WFP actually anticipates representative claim 1. Nevertheless, obviousness rejections can be based on references that happen to anticipate the claimed subject matter. *In re Meyer*, 599 F.2d 1026, 1031, 202 USPQ 175, 179 (CCPA 1979). Furthermore, we sustain the Examiner's obviousness rejection based on the teachings of WFP alone since we may rely on fewer references than the Examiner in affirming a multiple-reference rejection under 35 U.S.C. § 103. *In re Bush,* 296 F.2d 491, 496, 131 USPQ 263, 266-67 (CCPA 1961); *In re Boyer*, 363 F.2d 455, 458 n.2, 150 USPQ 441, 444 n.2 (CCPA 1966).[6]

Therefore, we will sustain the Examiner's rejection of representative claim 1. Likewise, we will sustain the Examiner's rejection of claims 2, 4-7, 13-15, 17-20, 26, and 27 as they fall with representative claim 1. *See* 37 C.F.R. § 41.37(c)(1)(vii).

Regarding claim 28, Appellants argue that restoring protected system files from a cache or installation media after the files are modified does not teach or suggest looking up at least one of critical files and file locations

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[6] Notwithstanding this conclusion, we nevertheless agree with the Examiner that the teachings of Rickey would have been reasonably combinable with WFP essentially for the reasons stated by the Examiner. The propriety of combining the teachings of Rickey with those of WFP has not been rebutted.

based on requests to write to the files or file locations (Br. 10-11; Reply Br. 5-6). The Examiner argues that when the file is modified to an incorrect version in WFP, the correct version is looked up and the incorrect file version replaced with the correct version. According to the Examiner, the look up is therefore based on the request to write as claimed (Answer 8-9).

We will sustain the Examiner's rejection of claim 28. Here again, the scope and breadth of the claim language does not preclude the disclosure of WFP. We note that WFP actually performs at least two "look ups" giving the term its broadest reasonable interpretation: (1) a look up of the file signature in a catalog to determine if the file is the correct version, and (2) if the file needs to be replaced, the correct file version is inherently "looked up" from the Dllcache folder or installation media as appropriate. *See* WFP, last three lines of P. 1 through P. 2, l. 1. Simply put, retrieving the correct file version from either the Dllcache folder or the installation media inherently involves looking up the file.

With this interpretation, we note that claim 28 merely broadly recites that critical files and/or critical file locations are looked up based on requests to write to the critical files and/or file locations. Given the broad scope of this limitation, either of the two "look ups" in WFP noted above is based, at least in part, on requests to write to the critical files. Although both lookups in WFP noted above occur after modification of the file as Appellants indicate, the lookups are nevertheless responsive to modification of the files—a modification that necessarily involves an associated write request.

While WFP indicates that critical files can be modified and replaced with correct file versions, WFP nevertheless also prevents writes to critical files as claimed in the preamble. As we indicated previously, WFP will not

replace the file if it is the correct version.[7] In this condition, writes to critical files are prevented thus fully meeting the limitation. We reach this conclusion emphasizing that the claim simply does not specify *which* writes are being prevented. Nor does the claim specify *which* request to write forms the basis for the look up.

For the foregoing reasons, we find WFP actually anticipates claim 28. Nevertheless, as we indicated in connection with claim 1, we will sustain the Examiner's obviousness rejection based solely on WFP.[8]

We will also sustain the Examiner's rejection of claims 3 and 16.[9] Although we find the Examiner's rationale pertaining to adjusting the cache size on P. 9 of the Answer problematic essentially for the reasons noted by Appellants (Reply Br. 7), we nevertheless find that WFP anticipates the claim giving the term "user configurable" its broadest reasonable interpretation. As we indicated previously, the claimed factors correspond to particular file versions in WFP.[10] Not only can the files themselves be configured by the user (e.g., by updating the files), but also the attributes associated with the particular files can be so configured. Appellants' arguments are simply not commensurate with the scope of representative claim 3.

Although WFP actually anticipates claim 3, we will nevertheless sustain the Examiner's obviousness rejection based solely on WFP for the

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[7] *See* P. 6, *supra,* of this opinion.

[8] *See id.* at 6-7.

[9] Appellants indicate that claims 3 and 16 correspond to Group #3 (Br. 11). Accordingly, we select claim 3 as representative of this group.

[10] *See* P. 5, *supra,* of this opinion.

reasons noted previously.[11] Likewise, we will sustain the Examiner's rejection of claim 16 which falls with representative claim 3.

Regarding claims 9, 10, 22, and 23,[12] Appellants argue that WFP does not teach or suggest updating factors as claimed, but merely repairs incorrect file versions. Appellants also argue that WFP only responds to modifications of files and not to requests as claimed (Br. 12; Reply Br. 8).

The Examiner argues that the administrator's ability to scan all protected files to verify their versions in the System File Checker tool in WFP corresponds to a user request to determine whether a file has been modified. The Examiner adds that replacing the file to the correct version if the file is modified corresponds to updating the file. The Examiner also notes that such file updates can be implemented from a cache via a local path or a network (Answer 9-10).

We will sustain the Examiner's rejection of representative claim 9. We agree with the Examiner that the administrator's ability in WFP to scan the protected files to verify their versions and replace modified files reasonably corresponds to updating the factors (i.e., particular file versions) based on a user request as claimed. Moreover, regarding claim 10, we agree with the Examiner that these updates from the Dllcache can be via a network path (WFP, at 3). Appellants' arguments are simply not commensurate with the scope of the claims.

Although WFP actually anticipates claims 9 and 10, we will nevertheless sustain the Examiner's obviousness rejection based solely on

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[11] *See id.* at 6-7.

[12] Appellants indicate that claims 9, 10, 22, and 23 correspond to Group #4 (Br. 12). Accordingly, we select claim 9 as representative of this group.

WFP for the reasons noted previously.[13] Likewise, we sustain the
Examiner's rejection of claims 22 and 23 for similar reasons.

Regarding claims 12 and 25,[14] Appellants argue that WFP's
prompting the administrator to insert media to replace the file does not teach
or suggest conditionally preventing writes to the files based on a user
confirmation as claimed. Appellants emphasize that if WFP prevented
writing to the file, there would be no need to replace the file (Br. 12-13;
Reply Br. 9-10). The Examiner argues that "user confirmation" occurs when
the user inserts media to replace the file. The Examiner adds that since the
correct version is copied from the media in this instance, such action
therefore prevents writing to the file with the incorrect version (Answer 10).

We will sustain the Examiner's rejection of claims 12 and 25. We
reiterate at the outset that claim 12, like claim 1, does not specify *which*
writes to the files are being prevented. Thus, the scope and breadth of the
claim simply does not preclude preventing either unauthorized or authorized
writes.

With this interpretation, we turn to WFP. First, we agree with the
Examiner that that "user confirmation" occurs when the user in WFP inserts
media to replace the file. Second, as we indicated in connection with claim
1, WFP's system replaces the file if the version is not the correct version
(WFP, last two lines of P. 1). That is, WFP will not replace the file if it is
the correct version. In this situation, WFP in effect conditionally prevents
writing to the file (correct version) which is based, at least in some instances,

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[13] *See* P. 6-7, *supra*, of this opinion.

[14] Appellants indicate that claims 12 and 25 correspond to Group #5 (Br.
12). Accordingly, we select claim 12 as representative of this group.

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on a file that was copied from the inserted media (i.e., based at least in part on a "user confirmation"). Claim 12 is therefore fully met by WFP.

Although WFP actually anticipates claim 12, we will nevertheless sustain the Examiner's obviousness rejection based solely on WFP for the reasons noted previously.[15] We also sustain the rejection of claim 25 for similar reasons.

Regarding claim 30, Appellants argue, among other things, that WFP's updating a file in a cache fails to suggest that a list of critical files is updated based on the requests as claimed (Br. 13; Reply Br. 10-11). The Examiner argues that when the cache in WFP does not hold all critical files, and a critical file is modified that is not on the list, media is inserted that effectively updates the list (Answer 10-11).

We will sustain the Examiner's rejection of claim 30. We note that the scope and breadth of the claim does not preclude the multiple critical files that are contained in the system of WFP which collectively constitute a list. Since at least one file of the collection of critical files is updated responsive to a file modification (write requests), the list is effectively updated based at least in part on the write requests. The claim is therefore fully met by WFP. Although we find WFP anticipates claim 30, we will nonetheless sustain the Examiner's obviousness rejection of claim 30 for the reasons previously discussed.[16]

We next consider the Examiner's rejection of claims 8, 21, and 31 under 35 U.S.C. § 103(a) as unpatentable over WFP in view of Rickey and

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[15] *See* P. 6-7, *supra*, of this opinion.
[16] *See id.*

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further in view of Stevens. Regarding claims 8 and 21,[17] the Examiner finds that the prior art discloses all of the claimed limitations except for the factors to include trusted applications that initiate the requests. The Examiner cites Stevens as teaching trusted applications and concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to use a trusted application in the prior art file protection system to allow trusted applications to access protected information (Answer 5-6). Appellants argue that Stevens does not disclose that a trusted application initiates the requests where the requests write to files on the computer (Br. 14; Reply Br. 12).

We will sustain the Examiner's rejection of claims 8 and 21. We note at the outset that essentially any computer file write requests effectively are initiated within the computer's operating system and therefore are initiated by "trusted applications" giving the term its broadest reasonable interpretation. For this reason alone, we find that WFP actually anticipates representative claim 8. We add that the replacing a file with the correct version in WFP would likewise cause the computer's operating system to inherently generate an associated request to write to the file – a write request that is initiated by a "trusted applications" (i.e., the computer's operating system) giving the term its broadest reasonable interpretation.

Although we find that WFP actually anticipates claim 8, we will nevertheless sustain the Examiner's obviousness rejection based solely on

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[17] Appellants indicate that claims 8 and 21 correspond to Group #1 of Issue #2 (Br. 11). Accordingly, we select claim 8 as representative of this group.

WFP for the reasons noted previously.[18] We also sustain the rejection of claim 21 for similar reasons.

We will not, however, sustain the Examiner's rejection of claim 31. The claim requires (1) alerting the user when one of the requests is initiated by an application that is not one of the trusted applications, and (2) allowing the user to prevent and/or permit the request. Although WFP alerts the user when the file is modified, and Stevens generally teaches allowing trusted applications access to protected areas of computer as the Examiner indicates (Answer 11), we do not agree that these collective teachings reasonably teach or suggest alerting the user specifically when a request is initiated by an untrusted application, and then allowing the user to prevent and/or permit the request as claimed. In essence, the claim requires some degree of user intervention with respect to the request itself.

Although the user in WFP is certainly alerted if a file has been changed to an incorrect version, the user is simply not allowed to prevent and/or permit the request that was initiated by the application. Even if the file was modified by an unauthorized source, the very act of modifying the file necessarily resulted in the write request being automatically permitted without user intervention.

For the foregoing reasons, we will not sustain the Examiner's rejection of claim 31.

DECISION

We have sustained the Examiner's rejections with respect to claims 1-10, 12-23, 25-28, and 30. We have not, however, sustained the Examiner's

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[18] *See* P. 6-7, *supra*, of this opinion.

rejection with respect to claim 31. Therefore, the Examiner's decision rejecting claims 1-10, 12-23, 25-28, 30, and 31 is affirmed-in-part.[19]

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

<u>AFFIRMED-IN-PART</u>

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[19] Although not before us on appeal, we note that at least independent claims 14 and 27 raise issues regarding whether the claims recite statutory subject matter under 35 U.S.C. § 101. For the reasons below, the Examiner should consider whether at least these claims recite statutory subject matter.

Claim 14, for example, recites a "computer program product" with three "computer code" limitations and limitations directed to alerting and updating the claimed factors. Similarly, claim 27 recites three "logic" limitations with commensurate limitations directed to alerting and updating the claimed factors.

Significantly, however, no computer-readable medium is recited in either claim. In effect, the claims appear to recite mere functional descriptive material that, without more, constitutes nonstatutory subject matter.

If, however, such functional descriptive material is recorded on a computer-readable medium, "it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized."). *See* MPEP § 2106.01.